

CLAIMS

What is claimed is:

1. A method for controlling a printing mode, the method comprising:
 2. receiving a request to change a printing mode of a printing device;
 3. generating a signed request that requests changing of the printing mode;
 4. validating the signed request; and
 5. enabling or disabling the printing mode in accordance with the signed request
 6. if the signed request is valid.
1. 2. The method of claim 1, wherein receiving a request to change a printing mode comprises receiving a request from a service provider who maintains the printing device.
1. 3. The method of claim 1, wherein generating a signed request comprises generating a signed request using a request generator that executes on a network-accessible server computer.
1. 4. The method of claim 1, wherein generating a signed request comprises generating a signed request that includes an identification code of the printing device.
1. 5. The method of claim 4, wherein generating a signed request comprises generating a signed request that further includes at least one of an expiration time, an identification of a client, and an identification of a service provider.

1 6. The method of claim 1, wherein generating a signed request comprises
2 generating a digital signature using a private key.

1 7. The method of claim 6, wherein generating a digital signature
2 comprises generating a digital signature using an identification code of the printing
3 device.

1 8. The method of claim 1, wherein validating the signed request
2 comprises validating the signed request using a request validator that executes on the
3 printing device.

1 9. The method of claim 1, wherein validating the signed request
2 comprises determining if a digital signature of the signed request is valid.

1 10. The method of claim 9, wherein determining if a digital signature is
2 valid comprises decrypting the digital signature using a public key.

1 11. The method of claim 1, wherein enabling or disabling the printing
2 mode comprises enabling or disabling reduced-toner printing.

1 12. The method of claim 1, wherein enabling or disabling the printing
2 mode comprises enabling or disabling CMYK printing.

1 13. A system for controlling a printing mode, the system comprising:
2 means for generating a signed request that requests changing of a printing
3 mode of a printing device;
4 means for validating the signed request on the printing device; and
5 means for enabling or disabling the printing mode.

1 14. The system of claim 13, wherein the means for generating a signed
2 request comprise a request generator that executes on a network-accessible server
3 computer.

1 15. The system of claim 13, wherein the means for generating a signed
2 request comprise means for generating a digital signature using an identification code
3 of the printing device.

1 16. The system of claim 13, wherein the means for generating a digital
2 signature comprise a private key.

1 17. The system of claim 13, wherein the means for validating the signed
2 request comprise a request validator that executes on the printing device.

1 18. The system of claim 17, wherein the request validator is configured to
2 decrypt a digital signature of the signed request using a public key stored in the
3 printing device.

1 19. The system of claim 13, wherein the means for enabling or disabling
2 the printing mode comprise means for enabling or disabling reduced-toner printing.

1 20. A system stored on a computer-readable medium, the system
2 comprising:

3 logic configured to generate a signed request on a server computer;
4 logic configured to validate the signed request on a printing device; and
5 logic configured to enable or disable a printing mode on the printing device in
6 accordance with the signed request.

1 21. The system of claim 20, wherein the logic configured to generate a
2 signed request comprises logic configured to generate a digital signature using a
3 private key and an identification code of the printing device.

1 22. The system of claim 20, wherein the logic configured to validate the
2 signed request comprises logic configured to determine if a digital signature of the
3 signed request is valid using a public key.

1 23. A request generator stored on a computer-readable medium, the
2 generator comprising:

3 logic configured to receive a request from a service provider to change a
4 printing mode of a printing device;
5 logic configured to verify the authorization of the service provider; and
6 logic configured to generate a signed request that is configured for installation
7 on the printing device and that requests changing of the printing mode.

1 24. The generator of claim 23, wherein the logic configured to receive a
2 request is further configured to receive an identification code of the printing device.

1 25. The generator of claim 24, wherein the logic configured to generate is
2 configured to generate a digital signature that is based upon the identification code.

1 26. The generator of claim 25, wherein the logic configured to generate is
2 configured to generate the digital signature using a private key.

1 27. The generator of claim 23, further comprising logic configured to
2 provide the signed request to the service provider.

1 28. A request validator stored on a computer-readable medium, the
2 validator comprising:

3 logic configured to receive a signed request that requests changing of a
4 printing mode;

5 logic configured to determine an identification code comprised by the signed
6 request;

7 logic configured to determine if a digital signature of the signed request is
8 valid; and

9 logic configured to enable or disable the printing mode.

1 29. The validator of claim 28, wherein the logic configured to determine if
2 a digital signature of the signed request is valid comprises logic configured to decrypt
3 the digital signature using a public key that is associated with a private key that was
4 used to generate the digital signature.

1 30. The validator of claim 28, wherein the logic configured to enable or
2 disable the printing mode comprises logic configured to enable or disable reduced-
3 toner printing.

1 31. The validator of claim 27, wherein the logic configured to enable or
2 disable the printing mode comprises logic configured to enable or disable CMYK
3 printing.

1 32. A printing device, comprising:
2 a processing device;
3 a print mechanism; and
4 memory that includes a request validator, the request validator being
5 configured to receive a signed request that requests changing of a printing mode,
6 determine if a digital signature of the signed request is valid, and enable or disable the
7 printing mode if the signed request is valid.

1 33. The device of claim 32, wherein the request validator is configured to
2 decrypt the digital signature using a public key that is associated with a private key
3 that was used to generate the digital signature.

1 34. The device of claim 32, wherein the request validator is configured to
2 enable or disable reduced-toner printing.

1 35. The device of claim 32, wherein the request validator is further
2 configured to determine an identification code comprised by the signed request and
3 compare it to an identification code of the printing device.